

REMARKS/ARGUMENTS

Claims 1-29 are pending in the present application. Claims 1, 2, 6-8, 13, and 15-18 have been amended to better describe the present invention. Claims 22-29 have been added.

1. Claims 1-5, 7-15 and 17-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by Yokosawa et al. (US Patent 6,261,232).

Regarding independent claims 1, 11 and 21, Examiner contends that Yokosawa discloses all the limitations of these claims. Applicants respectfully traverse the Examiner's rejection in light of the newly amended claims 1, 11 and 21.

Specifically, claims 1, 11 and 21 have been amended to more clearly define the present invention as an apparatus or method of measuring the flow velocity flowing through a conduit that includes an array of at least two ultrasonic sensors disposed along the longitudinal axis of the conduit. The claimed invention further includes the processing of the sensor signal to determine the velocity by defining a convective ridge in the k - ω plane and determining a slope of a portion of the convective ridge.

Yokosawa et al. does not disclose such an apparatus or method as defined in the newly amended claims 1, 11, and 21. Yokosawa et al. shows an ultrasonic imaging apparatus for measuring very fine tissue nature of organ interiors within a body, organ tissue and body surfaces (Col. 1, lines 7 – 11). The Examiner contends that the claimed invention shows an apparatus that defines a convective ridge in the k - ω plane and determines the slope to determine the velocity of the blood flow. However, Applicants can find no teaching of this. To the contrary, the invention appears to teach that the velocity of the blood flow is determined using the Doppler Effect (Col. 17, lines 48-67). Therefore, claim 1 is not anticipated by Yokosawa et al. for at least these reasons, and it is respectfully requested that these claims be reconsidered and allowed.

2. Claims 2-5, 7-10, 12-15 and 17-20 variously depend on independent claims 1, 11 and 21, and therefore are not anticipated by Yokosawa for at least the reasons provided hereinbefore. It is respectfully requested that these claims be reconsidered and allowed.

3. Claims 6 and 16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Yokosawa et al. (US Patent 6,261,232) in view of Gysling (US Patent 6,609,069). Applicants contend that it would not have been obvious to combine these two references. One skilled in the art would not have looked to combine the teaching of the ultrasonic imaging apparatus/probe and a strain-based flow meter. There is no suggestion that the sensors in Fig. 5 of Yokosawa requires more than one sensor to determine the velocity of the blood, thus providing no need or suggestion of using a Capon algorithm.

Further, claims 6 and 16 variously depend on independent claim 1 and 11, respectively, and therefore is not rendered obvious by Yokosawa et al. in view of Gysling. It is respectfully requested that claims 6 and 7 be reconsidered and allowed for at least the reasons provided hereinbefore.

4. Newly added dependent claims 25-29 variously depend on independent claim 11, and therefore are not anticipated or obvious for at least the reasons provided hereinbefore, and it is respectfully requested that these claims be allowed.

5. Newly added independent claim 22 include similar limitations as that discussed hereinbefore, and therefore are not anticipated or obvious for at least the reasons provided hereinbefore, and it is respectfully requested that these claims be allowed.

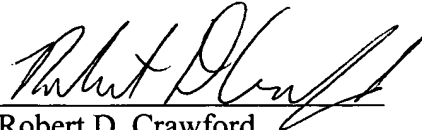
6. Newly added dependent claims 23-24 variously depend on independent claim 22, and therefore are not anticipated or obvious for at least the reasons provided hereinbefore, and it is respectfully requested that these claims be allowed.

7. In view of the foregoing, it is respectfully requested that the application be reconsidered and allowed. If the Examiner is not prepared to allow all the claims in view of the discussion herein, Applicants hereby respectfully request a phone interview with the Examiner at the Examiner's earliest convenient. Applicants' counsel can be reached at 203-626-3502 (direct dial) between the hours of 8:00 a.m. and 5:00 p.m., or by E-mail at rcrawford@cidra.com.

8. A petition for a three-month extension of time under 37 CFR 1.136 is submitted herewith. A check is enclosed to cover the fees of \$600.00 for the additional claims and \$1020.00 for the three (3) month extension of time. Any deficiency or overpayment should be charged or credited to Deposit Account No. 50-0260 Order No. CC-0700.

Respectfully submitted,

Alan D. Kersey et al.

A handwritten signature in black ink, appearing to read "Robert D. Crawford", written over a horizontal line.

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